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EXAMINER

JAIN, RAJ K

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/799,703  
Filing Date: March 15, 2004  
Appellant(s): BABIARZ, JOZEF

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Thomas E. Anderson  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed August 25, 2008 appealing from the Office action mailed January 24, 2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,625,118	Hadi Salim et al	11-2003
7,035,220	SIMCOE	4-2006

6,483,805

DAVIES

11-2002

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-11 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadi Salim et al (USP 6,625,118 B1) in view of Simcoe (USP 7,035,220 B1).

Regarding claims 1, 18 and 19, Hadi Salim discloses a method for admission control of packet flows in a network (see abstract), the method comprising:

determining at least a flow rate associated with a plurality of packets entering or exiting a network (see Figs. 1 & 4, col 2 lines 53-63, flow rate is determined by means of a packet flow control parameter to control the flow of packets from a source according to the packet flow control parameter);

marking at least one predetermined bit in at least one of the plurality of packets if the flow rate is greater than a predetermined rate (see Fig. 3, col 5 line 65- col 6 line 15, a CE bit as a predetermined bit is marked based on congestion status, further "flags" or

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predetermined bits that are marked are measured to see if the flow of packets exceeds a threshold and rate is adjusted accordingly, col 1 lines 44-59); and

controlling the initiated flow of packets across the network based at least in part on the marking of the at least one predetermined bit in the at least one of the plurality of packets (again see col 1 lines 44-59 and col 6 lines 5-55).

Hadi Salim while discloses a flow rate across a network, however, Hadi Salim explicitly fails to disclose initiating a flow of packets across a network.

Simcoe discloses a basic end-to-end congestion control within a network and further discloses initiating a flow of packets across a network (col 5 lines 27-53; claim 1). Packet flow initiation allows the destination to inform the source whether to increase or decrease the amount of data to send within a given interval. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Simcoe within Hadi Salim so as to improve network congestion control by properly signaling the source to initiate, increase, decrease or stop the flow packets based on network status.

Regarding claim 2, Hadi Salim discloses the network comprising of a plurality of network elements (Figs. 1 & 4 with hosts as source/receiver A and B and routers A and B), and the flow rate is determined at a first network element (col 2 lines 52-58; col 6 lines 6-11, flow rate is determined based on congestion status of the link at router A), where the first network element is part of an access link of the network (see Fig. 4 with source, routers and receivers, and the first network element the router A is part of the link network.).

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Regarding claim(s) 3 Hadi Salim discloses where the at least one of the plurality of packets comprises at least one signaling packet (see col 6 lines 17-20, ACK comprises as a signaling packet).

Regarding claim(s) 4 Hadi Salim discloses where the at least one signaling packet originates from an end terminal outside the network (Fig. 4, signaling packet ACK is generated at end terminal the receiver).

Regarding claim(s) 5 Hadi Salim discloses where information associated with the at least one predetermined bit in the at least one signaling packet is communicated to the end terminal (See Fig. 4, the signaling packet ACK communicates with an ECN bit which is predetermined to the end terminal say receiver, col 6 lines 10-16).

Regarding claim 6, Hadi Salim discloses where the end terminal echoes information associated with the at least one predetermined bit in the at least one signaling packet in a transmission to the network. (see Fig. 4, col 6 lines 1-3, an ECN-ECHO bit is used to signal to the network.).

Regarding claim 7, Simcoe discloses cancelling the flow of packets across the network if the at least one predetermined bit in the at least one of the plurality of packets is marked (col 5 lines 27-53; claim 1). Packet flow initiation allows the destination to inform the source whether to increase or decrease the amount of data to send within a given interval. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Simcoe within Hadi Salim so as to improve network congestion control by properly signaling the source to initiate, increase, decrease or stop the flow packets based on network status.

Regarding claim 8, Simcoe discloses initiated flow of packets across the network is controlled by an entity that controls the network (see col 1 lines 17-54, the destination measures and controls the of flow packets from the source and therefore is also the controlling entity). Packet flow initiation allows the destination to inform the source whether to increase or decrease the amount of data to send within a given interval. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Simcoe within Hadi Salim so as to improve network congestion control by properly signaling the source to initiate, increase, decrease or stop the flow packets based on network status.

Regarding claim 9, Simcoe discloses the control of the initiated flow of admission of the additional packets across the network is based at least in part on priorities or importance of the plurality of packets and the additional initiated flow of packets (col 3 lines 8-19). Packet flow initiation allows the destination to inform the source whether to increase or decrease the amount of data to send within a given interval. Thus it would have been obvious at the time the invention was made to incorporate the teachings of Simcoe within Hadi Salim so as to improve network congestion control by properly signaling the source to initiate, increase, decrease or stop the flow packets based on network status.

Regarding claims 10,, Hadi Salim discloses real time packets (see abstract, TCP/IP data packets constitute real time packets col 5 lines 25-37).

Regarding claims 11, Hadi Salim discloses wherein the plurality of packets comprise Internet Protocol (IP) packets (see Fig. 1, col 5 lines 25-62, plurality of packets comprise TCP and IP packets).

Regarding claims 14, Hadi Salim discloses where the predetermined rate is based on a network bandwidth allocated for the plurality of packets (see col 2 lines 20-30, col 7 lines 23-35.).

Regarding claims 15, Hadi Salim discloses wherein the predetermined rate is raised to a value above the allocated network bandwidth for a predetermined period of time (col 7 lines 54-67, as routers get congested the bandwidth for given flow is increased temporary).

Regarding claims 16, Hadi Salim discloses least one signal embodied in at least one carrier wave for transmitting a computer program of instructions configured to be readable by at least one processor for instructing the at least one processor to execute a computer process (col 4 lines 47-53; col 11 lines 20-33, claim 17, computer executable instructions are used to perform the desired operations).

Regarding claims 17, Hadi Salim discloses at least one processor readable carrier for storing a computer program of instructions configured to be computer application of subject system readable by at least one processor for instructing the at least one processor to execute a computer process (col 4 lines 47-53; col 11 lines 20-33, claim 17, computer executable instructions are used to perform the desired operations).



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hadi Salim et al (USP 6,625,118 B1) in view of Simcoe (USP 7,035,220 B1), further in view of Davies et al (USP 6,483,805 B1).

Hadi Salim and Simcoe fail to disclose VoIP applications and differentiated services field in an IP header of at least one packet.

Davies discloses VoIP applications (col 7 lines 4-45, various classes of traffic are defined prior to transmission, one such class with long term flow is voice packets transmitted using a TCP/IP protocol and therefore having a Voice over IP application) and differentiated services (see Fig. 6 which shows a structure of the differentiated services field in an IP packet, col 3 lines 42-45; col 10 lines 57-64 col 11 lines 48-67). Dynamically adapting packet flow thru the network based on packet or network priorities using differentiated services provides optimal bandwidth usage in a packet switched network.

Thus it would have been obvious at the time the invention was made to incorporate the teachings of Davies within Hadi Salim so as to improve network performance by providing differentiated services based on priorities to optimize network performance.

**(10) Response to Argument**

With respect to claim 1, Applicant contends Hadi Salim fails to disclose or suggest "determining a flow rate associated with a plurality of packets entering or exiting the network,".

Examiner respectfully disagrees, Hadi Salim discloses a system with plurality of network elements (see Figs. 1, 2 & 4, col 2 lines 53-63) comprising hosts A, B and routers A and B. A packet flow rate is determined by a packet entering a network (say from source A to router A) by means of a packet flow control parameter the ISQ messages (see Fig. 4; col 6 lines 40-45 ) which indicates the level of congestion to the source via the CE bit (col 2 lines 22-30) to control flow of packets from a source A according to the packet flow control parameter the CE bit as received from router A.

Appellant further contends "Hadi Salim discloses detecting incipient congestion at a node using a random early detection (RED) process, wherein the RED process monitors average queue lengths using a low pass filter."

While the Examiner concurs, that Hadi Salim discloses the use of RED process, however, Examiner asserts that Appellant has not clearly defined how the RED process interferes with "determining a flow rate associated with a plurality of packets entering or exiting the network,". Hadi Salim states (col 7 lines 7-10) that the RED process may be invoked which is an example of a congestion monitor and that it monitors average queue lengths using a low pass filter (col 7 lines 10-12), while the ISQ messaging is the actual indicator of the "degree of congestion" (emphasis added) (col 7 lines 13-15). Arguendo, even if the RED process is invoked, Examiner asserts that this in no way

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shape or form deviates from "determining a flow rate associated with a plurality of packets entering or exiting the network," as this is accomplished by the ISQ messaging sequence as discussed above.

Appellant further contends "Hadi Salim fails to disclose, or even suggest, marking at least one predetermined bit in at least one of the plurality of packets if the flow rate is greater than a predetermined rate,".

Examiner respectfully disagrees, Hadi Salim explicitly discloses the use of a CE bit as a predetermined marked bit (Fig. 3, col 5 line 65- col 6 line 15) used in the IP header to indicate congestion status. Furthermore predetermined bits or marked bits are specifically flagged to measure the flow of packets which may exceed network element thresholds and therefore requiring a rate adjustment accordingly, (col 1 lines 44-59).

Appellant further contends, "that Simcoe teaches away from Hadi Salim. Specifically, Appellant respectfully submits that Simcoe discloses intermediate nodes 210, and each intermediate node 210 comprises a plurality of interconnected resources, including a processor 212, a memory 214 and an input/output device, such as a network interface 218." See, e.g., column 6, lines 46-49. In contrast, Hadi Salim discloses intermediate node A comprises a router which may mark a packet by setting the CE bit in the IP header. Therefore, Appellant respectfully submits that it would not have been obvious at the time the invention was made to incorporate the intermediate nodes of Simcoe for the intermediate nodes of Hadi Salim."

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Examiner respectfully disagrees, while Hadi Salim discloses intermediate routers which marks the packet by use of CE bit in the IP header for congestion indication accordingly, however, Simcoe discloses (Fig. 2) the intermediate nodes 210, which can be nodes or routers or switches (col 6 lines 43-45) and furthermore Simcoe was incorporated to illustrate a basic end-to-end congestion control within a network and the initiating of a flow of packets across a network (col 5 lines 27-53; claim 1). Packet flow initiation allows the destination to inform the source whether to increase or decrease the amount of data to send within a given interval. Therefore, it would have been obvious at the time the invention was made to incorporate the teachings of Simcoe within Hadi Salim so as to improve network congestion control by properly signaling the source to initiate, increase, decrease or stop the flow packets based on network status.

Thus in view of the foregoing reasoning, Examiner respectfully asserts that Hadi Salim et al (USP 6,625,118 B1) in view of Simcoe (USP 7,035,220 B1) does disclose all the limitations of claim 1 and therefore the rejection to claim 1 is sustained and therefore not patentable.

Also, the rejection to claims 18 and 19 is also sustained as they recite features similar to claim 1 and therefore not patentable.

Furthermore, the rejection to claims 2-11 and 14-17 is sustained as features are properly taught within the subject references and outlined above accordingly (i.e. Hadi Salim et al (USP 6,625,118 B1) in view of Simcoe (USP 7,035,220 B1)), and therefore not patentable.

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With regards to claims 12 and 13, Appellant submits “that the aforementioned obviousness rejection of claims 12 and 13 has become moot in view of the deficiencies of the primary references (i.e., Hadi Salim and Simcoe) as discussed above with respect to independent claim 1”.

Examiner respectfully disagrees, while the primary references (i.e., Hadi Salim and Simcoe) fail to meet the limitations of claims 12 and 13, Examiner asserts that Davies discloses the limitations of claims 12 and 13 and specifically VoIP applications (col 7 lines 4-45, various classes of traffic are defined prior to transmission, one such class with long term flow is voice packets transmitted using a TCP/IP protocol and therefore having a Voice over IP application) and differentiated services (see Fig. 6 which shows a structure of the differentiated services field in an IP packet, col 3 lines 42-45; col 10 lines 57-64 col 11 lines 48-67). Thus since the cited references do in fact teach all limitations of claims 12 and 13, the rejection to claims 12 and 13 is sustained and therefore not patentable.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/RAJ JAIN/

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Examiner, Art Unit 2416

Conferees:

/William Trost/

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/FIRMIN BACKER/

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